REMARKS

I. Introduction

Claims 17, 18, 20 to 27 and 29 to 32 are currently pending in this application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

II. Rejection of Claims 17, 20, 28 and 30 to 32 Under 35 U.S.C. § 103(a)

Claims 17, 20, 28 and 30 to 32 were rejected as being obvious over the combination of U.S. Patent No. 5,582,415 ("Yoshida et al."), U.S. Patent No. 4,140,323 ("Jacobs") and U.S. Patent No. 5,230,521 ("Ueta"). Claim 28 has been previously canceled thus rendering the rejection of this claim moot. Applicant respectfully submits that claims 17, 20 and 30 to 32, are patentable over the combination of Yoshida et al., Jacobs and Ueta for the following reasons.

Claim 17 relates to a flat gasket for a reciprocating engine or a driven machine having a cylinder head. Claim 17 recites that the gasket includes at least one metal sheet 0.05 to 0.5 mm thick which is provided with a coating of an elastomer film at least on sides facing outward in at least one sealing area and which has an edge area. Claim 17 further recites that the edge area is formed by at least one of an outer contour of the cylinder head, a cylinder bore or a water or oil passage in the cylinder head. Claim 17 further recites that the edge area is adjacent to at least one peripheral self-contained cavity (2). Claim 17 further recites that the cavity (2) is enclosed by at least one bead (3) of the metal sheet (1) and a second metal sheet (4) bridging the bead, which are permanently joined together adjacent to the bead. Claim 17 further recites that the cavity (2) is filled completely with a hydraulic fluid. Claim 17 has been amended to recite that the hydraulic fluid is liquid at least under operating conditions. Support for this amendment can be found in the Specification, for example, at p. 4, lines 7 to 8 and 35 to 37.

Yoshida et al. purportedly relate to a metal gasket 10. Yoshida et al. state that metal gasket 10 comprises a beaded plate 45, including bead 16 and a stiffening plate 46, which is stated to wrap around a periphery of the opening of the beaded plate 45. See col. 8, lines 3 to 5. Metal gasket 10 is stated to be held between cylinder block 1 and cylinder head 4. See col. 5, lines 33 to 35.

Jacobs purportedly relates to an embossed gasket. Jacobs recites a gasket having a filler filled cavity. See col. 2, lines 52 to 55.

Ueta purportedly relates to a metallic laminate gasket with plates of different bead widths fixed together.

The Final Office Action alleges that Jacobs discloses "a gasket having a cavity (34) that is completely filled with a hydraulic medium (36) in order to prevent embossment (around cavity 34) from flattening out and losing much of its intended sealing

capacity." See Final Office Action at par. 3. The Final Office Action further alleges that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yoshida et al. as taught by Jacobs in order to prevent the bead from flattening out and losing sealing capacity." Final Office Action at par. 3. The Final Office Action, referring to col. 2, lines 52 to 64, further states that Jacobs discloses a fluid filler because Sylgard 187, stated to be used as the filler, is stated to be a fluid before it cures.

Applicant respectfully submits that the above reference to Jacobs in no way discloses a gasket having a fluid-filled cavity, wherein the fluid is liquid at least under operating conditions, as recited in amended claim 17. Jacobs states that a resilient elastomeric filler material, not a fluid, is disposed in indentation 34. See col. 2, lines 52 to 57. It is true that the Sylgard 187 filler is stated to require a catalyst to facilitate curing of the system, and therefore, at one point in time the Sylgard 187 is a fluid. See col. 2, lines 62 to 64. However, claim 17, as amended, recites that the hydraulic fluid is a fluid at least under operating conditions. Clearly, the Sylgard 187 is cured prior to use of the seal.

It is noted that during the telephonic interview of October 20, 2004, the Examiner indicated that claim 17, as amended, overcomes the cited prior art.

Therefore, for the foregoing reasons, it is respectfully submitted that the combination of Yoshida et al., Jacobs and Ueta does not disclose, or even suggest, all of the limitations of claim 17.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). As stated above, the combination of Yoshida et al., Jacobs and Ueta fails to disclose, or even suggest, each and every feature of claim 17. Specifically, the combination of Yoshida et al., Jacobs and Ueta does not teach, or even suggest, a cavity (2) filled completely with a hydraulic fluid, wherein the fluid is a liquid at least under operating conditions, as recited in amended claim 17. It is therefore respectfully submitted that the combination of Yoshida et al., Jacobs and Ueta does not render obvious claim 17. Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claim 17 are respectfully requested.

Claim 30 has been amended so as to remove its dependency from claim 17. As for claims 20, 31 and 32, which ultimately depend on claim 17 and therefore include all of the limitations of claim 17, Applicant submits that these claims are patentable for at least the same reasons provided above in support of claim 17. *In re Fine, supra* (any dependent claim depending from a non-obvious independent claim is non-obvious). Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claims 20, 31 and 32 are respectfully requested.

III. Rejection of Claim 18 Under 35 U.S.C. § 103 (a)

Claim 18 was rejected as obvious over the combination of U.S. Patent No. 5,054,795 ("Udagawa et al."), Yoshida et al., Jacobs and Ueta. Applicant respectfully submits that claim 18 is patentable over the combination of Udagawa et al., Yoshida et al., Jacobs and Ueta for the following reasons.

Claim 18 relates to a flat gasket for a reciprocating engine or a driven machine having a cylinder head. Claim 18 recites that the gasket includes at least one metal sheet 0.05 to 0.5 mm thick which is provided with a coating of an elastomer film and which has an edge area. Claim 18 further recites that the edge area is formed by at least one of an outer contour of the cylinder head, a cylinder bore or a water or oil passage in the cylinder head. Claim 18 further recites that the edge area is adjacent to at least one peripheral self-contained cavity (2), wherein the cavity (2) is filled completely with a hydraulic medium (6). Claim 18 further recites that the metal sheet has at least on sides facing outward from the cavity an elastomer film. Claim 18 further recites that the metal sheet (1) is flanged back onto itself in the edge area, forming the cavity (2), and is permanently connected to itself adjacent to the cavity.

Udagawa purportedly relates to a metal laminate gasket. The gasket 30 is stated to include a main plate 31 and a pressure regulation plate 32 situated above the main plate. See col. 2, lines 50 to 52. The main plate 31 is stated to include a flat base portion 33, a curved portion 34 and a flange 35. See col. 2, lines 53 to 55. The curved portion is stated to have a resiliency and forms an opening 36, through which a piston of an engine reciprocates. See col. 2, lines 57 to 59.

It is respectfully submitted that the combination of Udagawa et al., Yoshida et al., Jacobs and Ueta does not disclose, or even suggest, that the metal sheet (1) is flanged back onto itself in the edge area, forming the cavity (2), and is permanently connected to itself adjacent to the cavity, as recited in claim 18.

The Final Office Action alleges that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the flange and bead of Udagawa permanently connecting the portion of the sheet metal that is flanged back onto itself, to itself, to prevent local increases in pressure and, in turn, to better maintain the

roundness of the bore and reduce the overall size of the gasket. See Final Office Action at par. 10.

It is respectfully submitted that the cases of In re Fine, supra, and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992), make plain that the Final Office Action's generalized assertions that it would have been obvious to modify or combine references do not properly support a § 103 rejection. It is respectfully submitted that those cases make plain that the Office Action reflects nothing more than a subjective "obvious to try" standard, and therefore does not reflect the proper evidence to support an obviousness rejection based on the references relied upon. In particular, the Court in the case of In re Fine stated that:

> The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. This it has not done. . . .
>
> **Instead, the Examiner relies on hindsight in reaching his obviousness determination. . . . One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.**

In re Fine, 5 U.S.P.Q.2d at 1598 to 1600 (citations omitted; italics in original; emphasis added). Likewise, the Court in the case of In re Jones stated that:

> Before the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. . . .
>
> **Conspicuously missing from this record is any evidence, other than the PTO's speculation (if it be called evidence) that one of ordinary skill . . . would have been motivated to make the modifications . . . necessary to arrive at the claimed [invention].**

In re Jones, 21 U.S.P.Q.2d at 1943, 1944 (citations omitted; italics in original).

That is exactly the case here since it is believed and respectfully submitted that the present Final Office Action offers no evidence whatsoever, but only conclusory hindsight, reconstruction and speculation, which these cases have indicated does not constitute evidence that will support a proper obviousness finding. None of the patents or printed publications relied upon mention or refer to the motivation alleged in the Final Office Action for making the proposed combination or modification.

It is respectfully submitted that the present rejection reflects nothing more than the "insidious effect of a hindsight syndrome" sought to be prevented by 35 U.S.C. § 103(a). Unsupported assertions are not evidence as to why a person having ordinary skill in the art would be motivated to modify or combine references to provide the claimed subject matter of

the claims to address the problems met thereby. Accordingly, the Office must provide proper evidence of a motivation, outside of Applicant's application, for modifying or combining the references to provide the claimed subject matter.

The Final Office Action alleges that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the flange and bead of Udagawa permanently connecting the portion of the sheet metal that is flanged back onto itself, to itself, to prevent local increases in pressure, better maintain the roundness of the bore and reduce the overall size of the gasket. See Final Office Action at par. 10.

First, the referred to stoppers do not cause an increase in pressure. Rather, Ueta state that the stoppers are used to limit the magnitude of amplitude of the beads in order to prevent the break down of the beads. See col. 1, line 44 to col. 2, line 2.

Second, Applicant respectfully submits that the Final Office Action mischaracterizes Ueta. The Final Office Action seems to allege that Ueta provides a motivation for using a permanent connection, namely, the prevention of local increases in seal pressure and removal of relatively large stoppers. Respectfully, Ueta may state that its seal in general is an improvement over the prior art because it prevents local increases in pressure, however, this statement is directed to the overall configuration of the seal not the specifics of the connection between the two sheets making up the seal. See col. 1, line 68 to col. 2, line 1. The Ueta seal purportedly achieves improved sealing by using two sheets having different spring constants attached on either end of the seal. See col. 3, lines 19 to 26. Therefore, Applicant respectfully submits that one skilled in the art when designing a seal having a sheet flanged back on itself, as recited in claim 18, would not have been motivated to seal the flange with a permanent connection given the use of a permanent connection in a completely different type of seal, utilizing two sheets of metal having different material properties. Ueta does not teach generally that a permanent connection prevents local increases in pressure and maintains roundness of the beads. Rather, discussion by Ueta regarding preventing local increases in pressure and better maintaining the roundness of the beads relates to the bead configuration overall not the specific use of a permanent connection. Ueta teach that their bead design manage to do without a stopper while maintaining roundness without local increases in pressure. Nowhere does Ueta disclose, or even suggest, that use of a permanent connection on sheet flanged back on itself would better maintain roundness and minimize local increases in pressure.

The Final Office Action alleges that "one would eliminate stoppers and replace them with the joints of Ueta." Final Office Action par. 10. The Final Office Action further alleges that one of ordinary skill in the art at the time of the invention would modify the flange and bead of Udagawa permanently connecting the portion of the sheet that is flanged back onto itself, to prevent local increases in pressure and in turn, better maintain the roundness of the bore, and reduce the overall size of the gasket, therefore allowing for use in

smaller engines. Respectfully, the second allegation does not flow from the first. Just because one skilled in the art may be motivated by teachings in Ueta to use the entire joint of Ueta (first allegation) in no way provides suggestion, or motivation, for using a specific portion of the Ueta seal design, *i.e.*, one of the two permanent connections, on a completely different seal design, *i.e.*, a sheet folded back onto itself. This is especially so given the fact that Ueta does not disclose, or even suggest, that it is the permanent connection, as opposed to any other design element of the Ueta seal or the overall combination Ueta design elements, that provides for the prevention of local pressure increases, better bore roundness maintenance, etc.

Accordingly, Applicant respectfully submits that use of two permanent connections to bond together two metal sheets having different spring constants so as to form a seal, which seal allegedly prevents local increases in pressure and obviates the need for a stopper, does not render obvious the use of a single permanent connection in a seal to connect a portion of sheet metal that is flanged back onto itself. In fact, Ueta implicitly teaches away from the present invention in that Ueta teaches the use of two separate different sheets connected to each other as opposed to a single sheet folded back onto itself.

The Final Office Action further asserts that one would look to Ueta for a teaching of a gasket without a conventional stopper assembly, therefore allowing for a smaller, and in turn, lighter weight gasket, for use in a smaller engine. Applicant respectfully submits that even if this is the case, which it is not, Ueta does not provide a motivation to use a permanent connection on a seal that is flanged back onto itself, which is completely different than the Ueta seal.

The Federal Circuit in the case of In re Kotzab has made plain that even if a claim concerns a "technologically simple concept" — which is not the case here — there still must be some finding as to the "specific understanding or principle within the knowledge of a skilled artisan" that would motivate a person having no knowledge of the claimed subject matter to "make the combination in the manner claimed," stating that:

> In this case, the Examiner and the Board fell into the hindsight trap. The idea of a single sensor controlling multiple valves, as opposed to multiple sensors controlling multiple valves, is a technologically simple concept. With this simple concept in mind, the Patent and Trademark Office found prior art statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab's invention to make the combination in the manner claimed. In light of our holding of the absence of a motivation to combine the teachings in Evans, we conclude that the Board did not make out a proper prima facie case of obviousness in rejecting [the] claims . . . under 35 U.S.C. Section 103(a) over Evans.

In re Kotzab, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) (emphasis added). Again, it is believed that there have been no such findings.

Accordingly, there is no evidence that the references relied upon, whether taken alone, combined or modified, would provide the features and benefits of claim 18. Therefore, Applicant submits that the combination of Udagawa et al., Yoshida et al., Jacobs and Ueta does not render obvious claim 18. Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claim 18 are respectfully requested.

IV. Rejection of Claims 21 to 23 Under 35 U.S.C. § 103(a)

Claims 21 to 23 were rejected as obvious over the combination of Yoshida et al., Jacobs, Ueta and U.S. Patent No. 6,145,847 ("Maeda et al."). Applicant respectfully submits that claims 21 to 23, which ultimately depend from claim 17, are patentable over the combination of Yoshida et al., Jacobs, Ueta and Maeda et al. for at least the reasons provided above in support of the patentability of amended claim 17. Neither Ueta nor Jacobs nor Maeda et al. cure all of the deficiencies of Yoshida et al. The combination of Ueta, Jacobs and Maeda et al. does not disclose, or even suggest, a cavity (2) filled completely with a hydraulic fluid, wherein the hydraulic fluid is a liquid at least under operating conditions, as recited in amended claim 17, and therefore, does not render obvious claims 21 to 23. Therefore, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claims 21 to 23 are respectfully requested.

V. Rejection of Claim 24 Under 35 U.S.C. § 103(a)

Claim 24 was rejected as obvious over the combination of Yoshida et al., Jacobs, Ueta and U.S. Patent No. 4,428,593 ("Pearlstein"). Applicant respectfully submits that claim 24, which ultimately depends from claim 17, is patentable over the combination of Yoshida et al., Jacobs, Ueta and Pearlstein for at least the reasons provided above in support of the patentability of claim 17. Neither Jacobs nor Ueta nor Pearlstein cure the above noted deficiencies of Yoshida et al. The combination of Jacobs, Ueta and Pearlstein does not disclose, or even suggest, a cavity (2) filled completely with a hydraulic fluid, wherein the hydraulic fluid is a liquid under operating conditions, as recited in claim 17, and therefore, does not render claim 24 obvious. Therefore, withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claim 24 are respectfully requested.

VI. Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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